**Education & Research** 

# **Courses in Sustainability**

#### Criteria Used

The criteria for inclusion in the inventory was developed using the definition as articulated by the Brundtland Commission, formally the United Nations' World Commission on Environment and Development:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (UN Documents, n.d., 1.2.1)

## Sustainability is interdisciplinary in nature, and each area is assessed according to the following:

- Environmental Systems: considerations include, but are not limited to, ecosystem services, climate change & adaptation, biodiversity, air & atmosphere quality, hydrology, water quality, renewable and non-renewable energy, land use, environmental design, etc.
- Economic Sustainability: considerations include, but are not limited to, energy and resource management, policy and regulations, health economics, true-cost or triple-bottom line analysis, organizational behavior, carbon markets, etc
- Social Sustainability: considerations include, but are not limited to, social equity, gender equality, personal & public health, community development, cultural diversity, peace & human security, corporate social responsibility, etc.

The courses listed are either sustainability-focused or sustainability-related. The distinction used is provided by the Sustainability Tracking, Assessment & Rating System (STARS), as developed by the Association for the Advancement of Sustainability in Higher Education (AASHE). UCalgary is a charter participant of STARS:

- Sustainability-focused (core) courses concentrate on the concept of sustainability, including its social, economic, and environmental dimensions, or examine an issue
  or topic using sustainability as a lens.
- Sustainability-related courses incorporate sustainability as a distinct course component or module, or concentrate on a single sustainability principle or issue. They may complement sustainability-focused courses by providing students with in-depth knowledge of a particular aspect or dimension of sustainability (such as the natural environment) or by providing a focus area (such as renewable energy) for a student's sustainability studies, or they may broaden students' understanding of sustainability from within different disciplines.

All courses listed below are eligible towards the elective portion of the embedded Certificate in Sustainability Studies which is expected to launch in winter 2017.

# Choose a Faculty:

Expand all Collapse all

Faculty of Arts

### African Studies

AFST 501: Interdisciplinary Seminar

Anthropology and Archeology

ANTH 213: Contemporary Aboriginal Issues in Canada

ANTH 303: Business in Cultural Context

ANTH 313: Anthropology of the Environment

ANTH 341: Medical Anthropology

ANTH 343: Militarism and Militarization

ANTH 349: Anthropology of HIV/AIDS

ANTH 355: An Ethnographic Survey of Native North America

ANTH 357: Anthropology of Development

ANTH 363: Magic, Witchcraft, and Gods: Anthropology of Religion

ANTH 371: Political Anthropology

ANTH 379: Urban Anthropology

ANTH 385: Economic Anthropology

ANTH 393: Ethnography of Global-Local Dynamics

ANTH 399: Comparative Farming and Sustainable Food Systems

ANTH 405: Ecology of Tropical Forest Societies

ANTH 421: Contemporary Latin American Society

ANTH 427: Women in East Asian Societies

ANTH 441: Problems in the Anthropology of Health

ANTH 479: Housing and Society

ANTH 523: Human Ecology

ANTH/ARKY 589: Nutritional Anthropology

ANTH 641: Seminar in Civil-Military Relations

ARKY 423: Archaeology of the Arctic

ARKY 439: African Complex Societies

ARKY 591: Landscape Archaeology

#### **Canadian Studies**

CNST 361: Gender, Race and Ethnicity in Canada

CNST 591: Senior Seminar in Canadian Studies

## Classics and Religion

RELS 343: Religion and Social Morality

RELS 397: Religion and Science

RELS 398: Religion and the Environment

### Communication, Media and Film

COMS 393: Critical Perspectives on Health and Science

COMS 477: Food Culture and Communication

COMS 623: Social Contexts of Science and Technology

COMS 631: Social and Media Activism

COMS 711.68: Indigenous Media Activism

CMCL 617: Heritage and Identity - Issues and Approaches

STAS 325: Technology Within Contemporary Society

STAS 327: Science in Society

# **Development Studies**

**DEST 201: Introduction to Development Studies** 

DEST 375: Gender and Development

DEST 393: Theories and Applications of Development

DEST 400: Field School

DEST 401.3: Politics and Economics of Development

DEST 403: Sustainability and Human Ecology in the Circumpolar Arctic

**DEST 405: Environment and Development** 

DEST 485: International and Intercultural Communication

DEST 501.1: Theories of Development Policy

DEST 591: Critical Perspectives on Development Practice and Research

DEST 593: Current Theoretical and Methodological Issues

## **Economics**

ECON 209: Engineering Economics

ECON 321: The Global Trading System

ECON 337: Development Economics

ECON 349: The Economics of Social Problems

ECON 367: Agricultural Economics

ECON 377: Economics of the Environment

ECON 379: The Economics of Health

ECON 427: Energy Economics and Policy

ECON 473: Water Resource Economics and Policy

ECON 475: Economics of Natural Resources

ECON 487: Environmental Economics

ECON 527: World Oil Economics

ECON 619: Empirical International Trade

ECON 621: International Trade

ECON 675: Natural Resource Economics

ECON 677: Environmental Economics

ECON 679: Health Economics

ECON 723: Trade, Growth and the Environment I

ECON 725: Trade, Growth and the Environment II

### English

ENGL 302: Foundations: Introductions to Contemporary Theoretical Practices

ENGL 383.7: Introduction to Ecocriticism and Nature Writing

ENGL 384: Topic in Women's Literature

ENGL 385: Topic in Aboriginal Literatures

ENGL 387.99: Encountering Cultural Others

ENGL 391: Topic in Postcolonial Literature and Theory

ENGL 515: Postcolonial Studies

# Geography

GEOG 205: Gateway to Geography

GEOG 213: Geography of World Affairs

GEOG 251: The Human Environment

GEOG 253: Introduction to Cities

GEOG 311: Natural Events and Human Disasters

GEOG 317: Animal Geography

GEOG 321: Geography and Our Environment

GEOG 340: Qualitative Methods in Human-Environmental Research

GEOG 341: Introduction to Economic Geography

GEOG 351: Urban Social Geography

GEOG 365: Political Geography

GEOG 367: Population Geography

GEOG 397: Regional Geography of Selected World Areas

GEOG 403: Physical Oceanography and Climatic Variability

GEOG 407: Wind Science

GEOG 411: Fluvial Geomorphology

GEOG 413: Soil Characteristics and Formation

GEOG 415: Hydrology

GEOG 417: Biogeography and Natural Ecosystems

GEOG 421: Renewable Resources and Natural Environments

GEOG 425: Critical Approaches to Development: Theory and Applications

GEOG 429: Tourism, Recreation, and Environmental Management

GEOG 451: Urban Systems Development

GEOG 457: Geographic Information Systems II

GEOG 463: Cities, Poverty and Development

GEOG 465: Science, Nature and Politics

GEOG 503: Climate Change

GEOG 516: Ecohydrology

GEOG 517: Conservation GIS

GEOG 519: Landscape Ecology

GEOG 521: The Urban Environment

GEOG 522: Topics in Politics of the Environment

GEOG 523: Human Ecology

GEOG 529: Research and Planning for Tourism and Recreation Resources

GEOG 531: Field Studies in Remote Sensing and Natural Resource Management

GEOG 537: Field Studies in GIS and Natural Resource Management

GEOG 545: The Politics of the Environment

GEOG 553: Globalization and the City

GEOG 565: Urban Political Geography

GEOG 575: The Geography of HIV/AIDS

GEOG 619: Spatial Ecology

GEOG 621: The Politics of the Environment

GEOG 685: Arctic System Science

GEOG 691: Advanced Fluvial Geomorphology

GEOG 696: Urban, Regional and Global Political Economy Seminar

### History

HTST 307: The Contemporary World

HTST 345: Canadian Native History

HTST 354: Landscape, Settlement and Cities in Global History

HTST 357: Wild West/Mild West?: Comparative History of the U.S. and Canadian Wests

HTST 395: History of Energy: From Fire to Fossil Fuels and Beyond

HTST 437: Canadian Environmental History

HTST 447: Northern Horizons: Subarctic and Arctic Canadian History (formerly HTST 352)

HTST 493.38: History of Medicine and Health Care I

HTST 493.39: History of Medicine and Health Care II

HTST 493.36: Gender and Sexuality in the Western World

HTST 528: Exchange, Trade, and Cultural Encounter in North America

HTST 529: Topics in Native History

HTST 593.26: Selected Topics in History - The 1970s Energy Crises

HTST 675.4: Environmental History: Themes in Power, Imperialism and Military History

# Indigenous Studies

INDG 303: Indigenous Ways of Knowing I

INDG 305: Indigenous Ways of Knowing II

INDG 311: Indigenous Governance

INDG 317: Indigenous Perspectives on Holistic Science

INDG 397: Special Topics

INDG 399: Special Topics: International

INDG 407: Comparative International Indigenous Communities

INDG 415: Indigenous Ethics and Protocol

INDG 502.01: Indigenous Awareness: Canadian Issues

INDG 503: Selected Topics in International Indigenous Studies

#### International Relations

INTR 301: A Multidisciplinary Survey of International Relations

#### Latin American Studies

LAST 311: Critical Contemporary Issues in Latin American Studies

# Law & Society

LWSO 415: Socio-legal Issues in Contemporary Liberal Societies

LWSO 425: Law and Technology

# Philosophy

PHIL 275: Scientific and Critical Reasoning

PHIL 313: Bioethics

PHIL 345: Issues in Environmental Ethics

PHIL 347: Contemporary Moral Problems

# Political Science

POLI 279: Politics of the Global South

POLI 283: Issues and Trends In World Politics

POLI 381: Introduction to International Relations

POLI 405: Biopolitics

POLI 431: Political Parties and Interest Groups

POLI 447: Comparative Public Policy

POLI 453: Women and Politics

POLI 463: Politics of Post-Industrial States

POLI 470: Genocide, Justice, and Reconciliation

POLI 471: Africa: Contemporary Political Problems

POLI 473: Latin American Politics

POLI 479: International Relations of the Contemporary Arab World

POLI 483: Experiential Learning

POLI 485: The Politics of the International Economic Order

POLI 487: International Organizations

POLI 523: Canada and Circumpolar World

POLI 554: Women and Public Policy

POLI 571: The Politics of Human Rights

POLI 579: Political Economy of Development

POLI 585: Nonproliferation Regimes

POLI 587: International Ethics

POLI 619: War and Interpretation

POLI 653: Gender and Public Policy

POLI 675.31: Selected Topics in Advanced Comparative Politics - Energy Policy

POLI 681: Advanced Analysis of International Relations

POLI 683: Advanced Studies in Foreign Policy

POLI 684: Human Rights and Humanitarianism

POLI 687: Advanced Studies in Canadian Arctic Security

POLI 755.31: Environmental Policy Analysis

# **Psychology**

PSYC 330: Health Psychology

PSYC 427: Environmental Psychology

### Sociology

SOCI 307: Sociology of First Nations in Canada

SOCI 321: Sociology of Health and Illness

SOCI 353: Urban Sociology

SOCI 375: Sociology of Ethnicity and Racialization

SOCI 409: Social Determinants of Health

SOCI 453: Speical Topics in Urban Sociology

SOCI 475.5: Special Topics in Race and Ethnic Relations

SOCI 487: Sociology of Development

# **Urban Studies**

**UBST 311: The Gendered City** 

UBST 451: Planning in the Canadian City

UBST 461: The Transit City

UBST 591: Capstone in Urban Studies

# Women's Studies

WMST 301.01 Global Feminisms

WMST 301.03: Social Issues and Gender - Gender and Leadership

WMST 301.04 Women and Health

Faculty of Environmental Design

**Environmental Design** 

EVDS 401: Introduction to Environmental Design

EVDS 501: Interdisciplinary Seminar

EVDS 523: Sustainability in the Built Environment

EVDS 583.6: Special Topics in Environmental Design: The Fuss over Fracking

EVDS 601: Interdisciplinary Seminar

EVDS 611: GIS for Environmental Design

EVDS 616: Urban Transportation, Infrastructure and Land Use

EVDS 618: Urban Design Studio

EVDS 621: Health in the Built Environment

EVDS 623: Regional Planning Studio

EVDS 624: Impact Assessment and Risk Management

EVDS 626: Landscape Planning and Ecological Design

EVDS 643: Field Studies

EVDS 671: Urban Design Theory

EVDS 675: Urban Systems

EVDS 683.60: Solar Building Envelope Design - Renewable Technology

EVDS 683.66: Theory in Planning

EVDS 683.68: Sustainable Housing

EVDS 683.74: Sustainable Cities (Block Course)

EVDS 683. 85: Lifecycle Assessment

EVDS 723.02: Sustainable Futures and Planning Scenarios

EVDS 753: Research Skills and Critical Thinking

# **Architectural Studies**

ARST 423: Sustainability in the Built Environment

ARST 483: Interdisciplinary Seminar

**EVDS - Architecture** 

EVDA 580: Studio One: Design Thinking

EVDA 615: Environmental Control Systems

EVDA 617: Architectural Lighting Design

EVDA 682.02: Intermediate Studio - Impact of Human Construction on Global Ecosystems (and vice versa).

EVDA 682.04: Comprehensive Design Studio - Ecologies of Technology

EVDA 683.02: Intermediate Studio - Sustainable Buildings for Cold Climates

**EVDS - Planning** 

EVDP 623: Regional Planning and Land Use Management

EVDP 626: Landscape Ecology and Planning

EVDP 631: Planning and Public Engagement

EVDP 637: Community Planning

Faculty of Science

**Biological Sciences** 

BIOL 307: Ecology and Human Affairs

BIOL 309: Plants and People

**BIOL 313: Principles of Ecology** 

BIOL 375: Insects, Science and Society

**BIOL 451: Conservation Biology** 

BIOL 453: Plants in their Environment

BIOL 505: Medicinal Plant Biochemistry

CMMB 543: Environmental Microbiology

ECOL 413: Field Course in Ecology

ECOL 417: Aquatic Communities and Ecosystems

ECOL 439: Ecology of Populations

MSRC 312: Introduction to Marine Science

MSRC 525: Ecological Adaptations of Seaweeds

PLBI 401: Plant Biotechnology

ZOOL 528A.45: Independent Studies in Zoology (Landscape & Biodiversity)

ZOOL 528B.45: Independent Studies in Zoology (Landscape & Biodiversity)

#### Chemistry

CHEM 321: Environmental Chemistry

CHEM 423: Green Chemistry: Principles and Techniques

CHEM 521: Introduction to Atmospheric Chemistry

#### Geoscience

GLGY 202: Applications of Geoscience

GOPH 375: Natural Disasters and Critical Earth Phenomenon

# **Natural Sciences**

SCIE 403: Science in Society

SCIE 521: Principles of Solar Energy

SCIE 525: Principles of Wave and Wind Energy

SCIE 529: Project Course in Sustainable Energy, Environment and Economy

SCIE 531: Principles of Hydroelectric Energy

SCIE 533: Principles of Geothermal Energy

# Physics and Astronomy

PHYS 371: Introduction to Energy

Schulich School of Engineering

# **Biomedical Engineering**

BMEN 619.09: Special Topics in Biomedical Engineering - Biomimetics

# Chemical and Petroleum Engineering

ENCH 643: Air Pollution Control Engineering

## **Civil Engineering**

ENCI 481: Environmental Engineering

ENCI 502: Civil Engineering Aspects of Sustainable Communities

ENCI 506: Sustainable Infrastructure

ENCI 508: Environmental Aspects of Energy

ENCI 645: Risk Analysis

TRAN 473: Introduction to Transportation Planning

## **Electrical and Computer Engineering**

ENEL 581: Renewable Energy and Solid State Lighting for Human Development

ENEL 661: Grid-Connected Inverters for Alternate Energy Systems

ENEL 669: Renewable Energy and Solid State Lighting for the Developing World

# **Energy and Environment**

ENEE 355: Introduction to Energy and the Environment

ENEE 503: Life Cycle Assessment

ENEE 519.09: Speical Topics - Biomimetics

ENEE 573: Engineering Aspect of Sustainable Communities

ENEE 575: Alternative Energy Systems

EESS 601: Introduction to Energy and Environmental Systems

ENEN 671: Energy and Environment

ENEN 691: Environmental Policy Analysis

ENEN 693: Lifecycle Assessment

#### Engineering

ENGG 481: Technology and Society

# **Geomatics Engineering**

ENGO 581: Land Use Planning

ENGO 583: Environmental Modelling

ENGO/ENEN 637: Earth Observation for the Environment

# Mechanical Manufacturing and Manufacturing Engineering

ENME 539: Energy Systems

ENME 583: Mechanical Systems in Buildings

ENME 619.56: Special Problems - Introduction to Biomimicry

ENME 629: Fuel Science and Technology

ENME 637: Thermal Systems Analysis

Haskayne School of Business

## **Business and Environment**

BSEN 749: Rediscovering Leadership - The Haskayne Wilderness Retreat

BSEN 751: Strategies for Sustainable Development

# **Energy Management**

ENMG 489: International Energy Development

**Management Studies** 

MGST 597.17: Indigenous Peoples and Sustainable Development

MGST 797.19: Renewable Energy Impacts

Strategy and Global Management

SGMA 751: Strategic Management in the Global Energy Industry

**Tourism Management** 

TOUR 449: Policy Planning and Research in Tourism

TOUR 741: Policy Planning and Development in Tourism

Faculty of Law

#### Law

LAW 529: Biotechnology and the Law

LAW 563: International Human Rights and Humanitarian Law

LAW 583: Water Law

LAW 597: International Trade Law

LAW 617: Alternate Energy Law

LAW 626: International Development Law

LAW 627: International Environmental Law

LAW 634: Law of Species and Spaces

LAW 705: Seminar in Legal Theory - Natural Resources, Energy, and Environmental Law

Werklund School of Education

### **Educational Research**

EDER 613: Change and Innovation

EDER 651.29: Sustainability in the Workplace

EDER 689.12: Aspects of School Curriculum - Curricular Integration of Outdoor Education

EDER 689.47: Aspects of School Curriculum - Storied Affinities: Ecology, Hermeneutics, Buddhism

EDER 689.95: Aspects of School Curriculum - On Ecological Consciousness and Classroom Practice

EDER 689.96: Aspects of School Curriculum - The Story of the Ecological Heart of Consciousness

Cumming School of Medicine

## **Community Health Sciences**

MDCH 601: Determinants of Health

MDCH 666: Health Policy

MDCH 680: Foundations of Population/Public Health

MDCH 687: Environmental Health

MDCH 689: Global Health and Development

MDCH 780: Advanced Topics in Population/Public Health

Community Rehabilitation and Disability

CORE 545: Bioethics and Disability

CORE 547: Health Research, Emerging Technologies and Marginalized Groups

CORE 654: Health Research, Emerging Technologies and Marginalized Groups

**Health and Society** 

HSOC 301: Determinants of Health

**Medical Science** 

MDSC/BIOL 515: Cellular Mechanisms of Disease

MDSC 613.01: Advanced Studies in Microbiology

Medicine

MDCN 340: Population Health

Faculty of Veterinary Medicine

### **Veterinary Medicine**

VETM 323: Animals, Health, and Society

VETM 440: Public Health and Risk Analysis

VETM 451: Selected Topics in Areas of Emphasis II

VETM 507: Professional Skills III

VETM 561: Ecosystem and Public Health Field Course

VETM 583: Ecosystem and Public Health

Faculty of Nursing

### Nursing

NURS 288: Supporting Health I: Communities and Populations

NURS 401: Community Health Theory

Faculty of Social Work

### Social Work

SOWK 300: Generalist Practice in Context Theme Course

SOWK 302: Research in Context Theme Course

SOWK 304: Diversity and Oppression Theme Course

SOWK 363: Human Development and Environments

SOWK 383: Social Policy and Social Justice

SOWK 397: Practice and Evaluation with Communities

SOWK 632: Social Policy and Social Justice

SOWK 665: Influencing Policy Development

SOWK 669: Leading Organizations and Communities

SOWK 671: Social Policy

SOWK 673: International Social Development

SOWK 697: Diversity, Oppression and Social Justice

Faculty of Kinesiology

Kinesiology

KNES 339: Natural Environments, Wellness, and Health

University of Calgary Topics

## Interdisciplinary Topics

UNIV 207: Exploring Sustainability

UNIV 511.01: Topics in Sustainability - Introduction to Sustainable Development

UNIV 511.02: Topics in Sustainability - Theoretical Basis for Interdisciplinary Intervention & Design

UNIV 513: Introduction to Interdisciplinary Design Structure

UNIV 515: Advanced interdisciplinary Design Practice

UNIV 611.01: Topics in Sustainability - Introduction to Sustainable Development

UNIV 611.02: Topics in Sustainability - Theoretical Basis for Interdisciplinary Intervention & Design

UNIV 613: Introduction to Interdisciplinary Design Structure

UNIV 615: Advanced Interdisciplinary Design Practice

# Sustainable Energy Development (MSc)

SEDV 601: Energy Systems I: Non-Renewable Energy

SEDV 603: Energy Systems II: Renewable Energy

SEDV 605: Ecology, Sustainable Development, and Indigenous Cultures

SEDV 607: Water Pollution and its Impact on the Energy Sector

SEDV 609: Air Pollution and its Impact on the Energy Sector

SEDV 611: Land Pollution and Waste Management in the Energy Sector

SEDV 615: Environmental Impact Assessment in the Energy Sector

SEDV 621: Environmental Management Tools in the Energy Sector

SEDV 623: Strategic Environmental Planning for Energy Organizations

SEDV 625: Research Project

SEDV 627: Group Research Project

SEDV 631: Life Cycle Assessment in the Energy Sector

SEDV 699: Topics in Energy and the Environment

Innovation

INNO 323: The Practice of Innovation

## Adding a Course

If you are a faculty member offering a course that meets the criteria mentioned above but is not listed in the inventory please let the Office of Sustainability know by emailing sustain@ucalgary.ca







